CLAIMS

1. A recording device comprising:

one or more semiconductor memories;

an obtaining unit operable to obtain an upper limit of current to be supplied from an accessing apparatus to the recording device;

a command obtaining unit operable to obtain from the accessing apparatus a command instructing access to the semiconductor memories;

an access unit operable to receive current supply from the accessing apparatus and access the semiconductor memories according to one or more control signals; and

a control unit operable to calculate an access upper limit by subtracting an amount of current consumed by individual units other than the semiconductor memories and the access unit from the upper limit, set operating conditions of the access unit and the semiconductor memories using the access upper limit, generate the control signals based on the command and the operating conditions, and output the control signals.

2. The recording device of Claim 1, wherein

the control unit prestores therein a current consumption value representing an amount of current consumed by the access unit and the semiconductor memories in association with the command, and sets the operating conditions corresponding to the command using the access upper limit and the current consumption value.

3. The recording device of Claim 2, wherein

the control unit sets the operating conditions so that a parallel-operation count of memories out of the semiconductor memories operate in parallel, the parallel-operation count being smaller than or equal to number of pieces of all the semiconductor memories, and

outputs to the access unit the control signals generated based on the command and the operating conditions, and instructing access to the parallel-operation count of memories, and

the access unit accesses the parallel-operation count of memories.

4. The recording device of Claim 3, wherein

the current consumption value represents the amount of current consumed by the access unit and the semiconductor memories for causing one of the semiconductor memories to operate, and

the control unit calculates, as the parallel-operation count, a quotient obtained by dividing the access upper limit by the current consumption value.

5. The recording device of Claim 4, wherein

the control signals each include a memory information piece specifying one of the semiconductor memories,

the control unit sequentially outputs the control signals, and

the access unit receives each of the control signals and accesses a semiconductor memory specified by the memory information piece.

6. The recording device of Claim 2, wherein

the control unit sets the operating conditions so that the semiconductor memories operate at a memory frequency which is no more than a maximum operating frequency of the semiconductor memories,

generates a clock signal having a same frequency as the memory frequency based on the command and the operating conditions, and outputs to the access unit the control signals each including the generated clock signal, and

the access unit outputs the clock signals received from the control unit to the semiconductor memories and accesses the semiconductor memories.

7. The recording device of Claim 6, wherein

the control unit prestores therein, as the current consumption value, a maximum current value which represents an amount of current consumed by the access unit and the semiconductor memories when the semiconductor memories operate at the maximum operating frequency, and calculates the memory frequency using the access upper limit and a ratio of the maximum operating frequency to the maximum current value.

8. The recording device of Claim 7, wherein

the control unit prestores therein the maximum operating

frequency together with the maximum current value.

9. The recording device of Claim 6, wherein

the control unit prestores therein the current consumption value associated with the command that instructs data reading, and sets the operating conditions so that the semiconductor memories operate at the memory frequency in response to the command instructing the data reading.

10. The recording device of Claim 6, wherein

the control unit includes a frequency divider, generates the clock signal having a same frequency as the maximum operating frequency using the frequency divider, and outputs the control signals each including the generated clock signal.

11. The recording device of Claim 6, wherein

the control unit includes a PLL (Phase Lock Loop), generates the clock signal having a same frequency as the maximum operating frequency using the PLL, and outputs the control signals each including the generated clock signal.

12. The recording device of Claim 2, wherein

the control unit sets, as the operating conditions, a 1st operating condition in which a parallel-operation count of memories out of the semiconductor memories operate in parallel and a 2nd operating condition in which the semiconductor memories operate at an operating frequency no more than a maximum operating frequency of the semiconductor memories,

adopts at least one of the 1st and 2nd operating conditions based on the command, and generates the control signals based on the adopted operating condition.

13. The recording device of Claim 2, wherein

the semiconductor memories are flash memories.

14. The recording device of Claim 2, wherein

the semiconductor memories are nonvolatile magnetic memories.

15. The recording device of Claim 1, wherein

the obtaining unit obtains the upper limit by a Set Features command complying with ATA (AT Attachment) standard.

16. The recording device of Claim 1, wherein

the semiconductor memories are portable and detachable from the recording device, and

the obtaining unit, the access unit and the control unit make up a memory card drive device for reading and writing information from/to the semiconductor memories.

17. The recording device of Claim 15, wherein

the control unit outputs the control signals each including a clock signal, and

the access unit supplies the clock signal only to one or more of the semiconductor memories being accessed, and stops supply of the clock signal to remaining one or more of the

semiconductor memories being not accessed.

18. An access method used in a recording device including one or more semiconductor memories, comprising the steps of:

obtaining an upper limit of current to be supplied from an accessing apparatus to the recording device;

obtaining from the accessing apparatus a command instructing access to the semiconductor memories;

receiving current supply from the accessing apparatus and accessing the semiconductor memories according to one or more control signals; and

calculating an access upper limit by subtracting an amount of current consumed by individual units other than the semiconductor memories and the access unit from the upper limit, setting operating conditions of the access unit and the semiconductor memories using the access upper limit, generating the control signals based on the command and the operating conditions, and outputting the control signals.

19. An access program used in a recording device including one or more semiconductor memories, and causing a computer to execute the steps of:

obtaining an upper limit of current to be supplied from an accessing apparatus to the recording device;

obtaining from the accessing apparatus a command instructing access to the semiconductor memories;

receiving current supply from the accessing apparatus and accessing the semiconductor memories according to one or more

control signals; and

calculating an access upper limit by subtracting an amount of current consumed by individual units other than the semiconductor memories and the access unit from the upper limit, setting operating conditions of the access unit and the semiconductor memories using the access upper limit, generating the control signals based on the command and the operating conditions, and outputting the control signals.

20. The access program of Claim 19 stored in a computer-readable recording medium.